

DOUBLE SIDEBAND-INTERMEDIATE FREQUENCY  
RADIO RECEIVER ARCHITECTURE

## ABSTRACT OF THE DISCLOSURE

5 A radio frequency (RF) receiver comprising: 1) a local oscillator (LO) circuit capable of receiving a local oscillator (LO) reference signal having frequency, LO, and a double sideband (DSB) clock signal having a frequency, DSB, and generating therefrom an in-phase product signal of the LO reference signal  
10 and the DSB clock signal in which a polarity of the LO reference signal is reversed at the DSB frequency of the DSB clock signal; and 2) a first radio frequency (RF) mixer having a first input port capable of receiving the in-phase product signal from the LO circuit and a second input port capable of receiving a modulated  
15 radio frequency (RF) signal, wherein the first RF mixer generates a first downconverted output signal.